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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,760	07/09/2003	Harry V. Gelboin	015280-389200US	2288

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EXAMINER	
SKELDING, ZACHARY S	
ART UNIT	PAPER NUMBER
1644	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/616,760	GELBOIN ET AL.	
	Examiner	Art Unit	
	ZACHARY SKELDING	1644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 November 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13-15,18-22,24-26,74-78 and 80-82* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13-15, 18-22, 25, 26, 76-78 and 80-82* is/are rejected.

7)☒ Claim(s) *24,74 and 75* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's amendment to the claims filed November 26, 2007 has been entered.

   Claims 1-12, 16-17, 23, 27-73, 79 have been canceled.

   Claims 13, 15, 25, 76-78 and 80-82 have been amended.

   Claims 13-15, 18-22, 24-26 and 74-78 and 80-82 are pending.

2. Claims 13-15, 18-22, 24-26 and 74-78 and 80-82 are under consideration as they read on a monoclonal antibody that competes with MAb 763-15-5 for specific binding to p450 2C9 allelic variants 2C9*1, 2C9*2, and 2C9*3 either at the same epitope bound by the monoclonal antibody 763-15-5 or wherein the monoclonal antibody inhibits 2C18 catalyzed metabolism of phenanthrene by at least 30%.

   The rejections of record can be found in the previous Office Action, mailed July 26, 2007.

   This Office Action is in response to Applicant's amendment filed November 26, 2007.

   The previous rejection under 35 U.S.C. § 112, 1st paragraph has been withdrawn in view of applicant's amendment to the claims.

   Upon further consideration, the previous rejections under 35 U.S.C. 102(e) and 103(a) have been withdrawn.

   New Grounds of Rejection are set forth below.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

   > A person shall be entitled to a patent unless –
   >
   > (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 13-15, 19-21, 25, 26, 76-78 and 80-82 are rejected under 35 U.S.C. 102(b) as anticipated by Mei et al. (WO 01/011035 A1), as evidenced by Kimura et al. (Nucleic Acids Res. 1987 Dec 10;15(23):10053-4, of record) and as further evidenced by the instant specification at the paragraph bridging pages 1-2, which discloses that the 2C9*2 allele has Cys144, and at pages 26 and 28, 1st paragraphs, which disclose how to make anti-2C9 antibodies using 2C9*2 as the immunizing antigen.

Mei teaches monoclonal antibodies raised against the 2C9 p450 polypeptide encoded by the 2C9 cDNA described by Kimura et al. (Nucleic Acids Res. 1987 Dec 10;15(23):10053-4), and eukaryotic cell lines producing said antibodies (see entire document, in particular, page 5, last paragraph to page 6, pages 15-20 and pages 27-30). As evidenced by Kimura Figure 1, the 2C9 cDNA used to make the Mei antibodies has Cys 144, which means that it encodes the 2C9*2 allele as evidenced by the instant specification at the paragraph bridging pages 1-2.

Thus, Mei teaches monoclonal antibodies raised against the 2C9*2 p450 polypeptide.

The instant claims are drawn to a monoclonal antibody that competes with the MAb 763-15-5 (wherein MAb 763-15-5 is a monoclonal antibody raised against the 2C9*2 p450 polypeptide as evidenced by the instant specification at pages 26 and 28, 1st paragraphs) for specific binding to the human cytochrome p450 2C9 allelic variants 2C9*1, 2C9*2 and 2C9*3 at the same epitope bound by the monoclonal antibody MAb 763-15-5.

Given that the monoclonal antibodies of Mei and the claimed monoclonal antibodies are both raised against the same polypeptide, the monoclonal antibodies of Mei inherently compete with MAb 763-15-5 for specific binding to the human cytochrome p450 2C9 allelic variants 2C9*1, 2C9*2 and 2C9*3 at the same epitope bound by the monoclonal antibody MAb 763-15-5.

Once a *prima facie* case of anticipation with a basis in fact and/or technical reasoning which reasonably supports the determination that an allegedly inherent characteristic necessarily flows from the teachings of the applied prior art is established it is applicant's burden to prove that the subject matter shown to be in the prior art does not possess the characteristics of the claimed invention. See Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Patent App. & Int. 1990); In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985); In re King, 801 F.2d 1324, 1327, 231 USPQ 136, 138 (Fed. Cir. 1986) and MPEP § 2112.

Since the Office does not have a laboratory to test the reference antibodies, it is applicant's burden to show that the reference antibodies do not compete with the 763-15-5 antibody for specific binding to the 2C9 allelic variants. See In re Best, 195 USPQ 430, 433 (CCPA 1977); In re Marosi, 218 USPQ 289, 292-293 (Fed. Cir. 1983); In re Fitzgerald et al., 205 USPQ 594 (CCPA 1980).

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mei et al. (WO 01/011035 A1) in view of Kimura et al. (Nucleic Acids Res. 1987 Dec 10;15(23):10053-4, of record), the instant specification at the paragraph bridging pages 1-2, which discloses that the 2C9*2 allele has Cys144, and at pages 26 and 28, 1st paragraphs, which disclose how to make anti-2C9 antibodies using 2C9*2 as the immunizing antigen and Maeda et al. (J Med Virol. 1999 Aug;58(4):338-45, of record).

   The teachings of Mei and the instant specification are given in Section 4 above.

   The teachings of Mei differ from the instant claims in that they do not explicitly recite making Fab fragments or the use of prokaryotic cells for expressing antibodies.

   However, Maeda teaches antibody Fab fragments and the use of prokaryotic cells to express said fragments (see entire document, in particular Materials and Methods, pages 339-340 as well as Discussion pages 343-344, including page 344, left column, 1st paragraph). Maeda also teaches that Fab expression in prokaryotic cells is cheaper, faster and easier than Fab expression in mammalian cells (see, *ibid*).

   Given the reference teachings it would have been prima facie obvious to one of ordinary skill in the art to make Fab fragments of the monoclonal antibodies of Mei because Fab fragments have long been known by the skilled artisan to be an alternative to full length intact antibodies, and it is obvious to substitute art recognized equivalents known for the same purpose, see MPEP § 2144.06.

   Furthermore, it would have been obvious to use prokaryotic cells whenever possible to express the competitive antibodies, in particular competitive Fab antibodies, since expression in prokaryotic cells is cheaper, faster and easier than in mammalian cells as taught by Maeda.

   Given the teachings of the references, it was apparent that one of ordinary skill in the art would have had a reasonable expectation of success in arriving at the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

7. Claim 24, 74 and 75 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ZACHARY SKELDING whose telephone number is (571)272-9033. The examiner can normally be reached on Monday - Friday 8:00 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen O'Hara can be reached on 571-272-0878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Zachary Skelding, Ph.D.
Patent Examiner
February 26, 2008

/Michail A Belyavskyi/
Primary Examiner, Art Unit 1644